

Abstract

*REPLACEMENT
ABSTRACT*

A new method, which builds the models at m-th step directly from models at the initial step, is provided to minimize the storage and calculation. The method therefore merges the $M \times N$ transforms into a single transformation. The merge guarantees the exactness of the transformations and make it possible for recognizers on mobile devices to have adaptation capability.

*OK to
ENTER*

A new iterative hierarchical linear regression method for generating a set of linear transforms to adapt HMM speech models to a new environment for improved speech recognition is disclosed. The method determines a new set of linear transforms at an iterative step by Estimate-Maximize (EM) estimation, and then combines the new set of linear transforms with the prior set of linear transforms to form a new merged set of linear transforms. An iterative step may include realignment of adaptation speech data to the adapted HMM models to further improve speech recognition performance.

*DL5
7/3/85*